REMARKS

Claims 1-32 are all the claims pending in the application.

The Examiner has objected to Figs. 1, 2, 3, and 11, asserting label "5" in these figures is inconsistent with the labeling convention of input/output ports 8, 9, 10, and 11. Applicant has amended Figs. 1 and 11, moving reference numbers "5" into blocks for data driving circuits 2a and 2b.

As to Figs. 2 and 3, Applicant asserts that label "5" in these two figures is consistent with the labeling convention of input/output ports 8 and 9. Thus, Applicant has not amended Figs. 2 and 3.

The Examiner also has objected to the drawings because the direction of the data flow and congestion signals allegedly were not shown. In Fig. 1, arrows have been added to the data line 20 and the congestion line 30 to indicate the direction of the data flow and congestion signals. The specification as originally filed describes the direction of the data flow and congestion signals in detail. No new matter has been added.

Claims 1-4, 6-9, 15-18, 21-28, and 30-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by USP 5,457,687 to Newman. Claims 5, 10-14, 19-20 and 29 are objected to as being dependent upon a rejected base claim. Applicant respectfully traverses these rejections and objections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

First, Applicant asserts that Newman is an inappropriate reference. The present application relates to an interconnect circuit in an integrated circuit (Specification, page 1, the first paragraph). The purpose of the present invention is to reduce the latency of a long interconnect while simultaneously addressing the problem of lost data which can occur due to congestion (Specification, page 3, the second full paragraph). There is nothing in the present application that extends the use of the invention outside of the integrated circuit context. However, Newman is about reactive congestion control in an asynchronous transfer mode (ATM) network formed by interconnection nodes. Applicants submit that it is improper for the Examiner to construe the claims of the present application so broadly as to include ATM.

Even assuming, *arguendo*, that Newman is an appropriate reference, it fails to teach or suggest the subject matter of claims of the present application. Independent claim 1 recites an interconnect circuit comprising a data line for transmitting data signals, and a congestion line for transmitting congestion signals, wherein said data line *selectively* interrupts and reestablishes transmission of data signals at *selected portions of said data line* responsive to congestion signals. Independent claim 26 recites *selectively interrupting and reestablishing* transmission responsive to congestion signals.

Applicant submits that the Examiner has not addressed the "selectively interrupting and reestablishing" aspects adequately in reading the claims on Newman. Applicant has reviewed the cited portions of Newman, and other portions of Newman as well. As discussed below, Applicant submits that Newman does not teach or suggest the claimed invention.

Newman describes reactive congestion control in an asynchronous transfer mode (ATM) network. As shown in Fig. 1 of Newman, the ATM network is formed by a number of source/destination (S/D) units 4, and a number of nodes 5. Each user sends information as a source and receives information as a destination. Fig. 2 of Newman shows a virtual channel from a S/D unit 4-X to a S/D unit 4-Y via a number of nodes 5. As shown in Fig. 3 of Newman, each node 5 includes forward circuits 6 for transfer of information from source 4-(S) to destination 4-(D), reverse circuits 7 for returning congestion control signals from destination 4-(D) to source 4-(S), and a feedback connection 9 connecting from a forward circuit 6 to a respective reverse circuit 7. The feedback channels 9 are used to send back an explicit congestion signal to the source 4-(S) via reverse channels 8-() R and reverse circuits 7.

In the Fig. 3 circuit, a virtual channel connection is made along a forward channel 8-() F, setting up a communication path in the forward direction between the source unit 4-(S) and the destination unit 4-(D). When the source unit 4-(S) receives an explicit congestion signal on a reverse channel 8-()R, it takes corrective action to reduce the rate at which data is inserted over the forward channel through channel 8-0F. After a period such that congestion is likely to have cleared, the source unit 4-(S) restores the insertion rate of information in the forward channel over the channel 8-0F to its maximum rate (Newman, col. 9, lines 2-26).

Fig. 8 of Newman shows a variable rate unit 80 which forms a part of each source. A control memory 81 stores for each virtual channel a congestion level value indicating the level of the reduced rate of transmission due to congestion on the virtual channel, a recovery rate value indicating the rate of recovery of transmission rate after the rate has been reduced due to

congestion on the virtual channel, a counter field for counting cells during congestion periods, and a control field for controlling changes in rate during congestion periods. A controller 85 accesses the control memory 81 for each cell for every virtual channel being transmitted by a direct memory access control 84. Upon receipt of a congestion signal, the controller 85 modifies the control rate in the control memory 81 for that virtual channel (Newman, col. 13, lines 14-40).

Thus, Newman only teaches sending congestion signals back to the source of a virtual channel suffering from congestion, and reducing and restoring a transmission *rate* for that virtual channel by the source unit of the virtual channel. Newman teaches continuing transmission in the face of congestion. Newman fails to teach or suggest *selectively interrupting and reestablishing* transmission of data signals at *selected portions* of the data line. None of the portions of Newman that the Examiner has cited vary from, or contradict in any way the operation of Newman as Applicant has just described it. Therefore, Applicant submits that claim 1 and its dependent claims 2-25 are patentable.

Independent claim 26 recites method steps of providing a data line for transmitting data signals from a first terminal to a second terminal through a plurality of data driving circuits, and *selectively* interrupting and reestablishing transmission of data signals at *data driving circuits* responsive to congestion signals.

Similarly to claim 1, claim 26 recites the selectivity feature. Thus, claim 26 and its dependent claims 27-32 are patentable at least for the same reason as claim 1.

In addition, in the method recited in claim 26, it is the data driving circuits between a first terminal and a second terminal that adjusts the data transmission. However, Newman only teaches adjusting data transmission rate by a source. Accordingly, claim 26 and its dependent claims 27-32 are patentable this reason as well.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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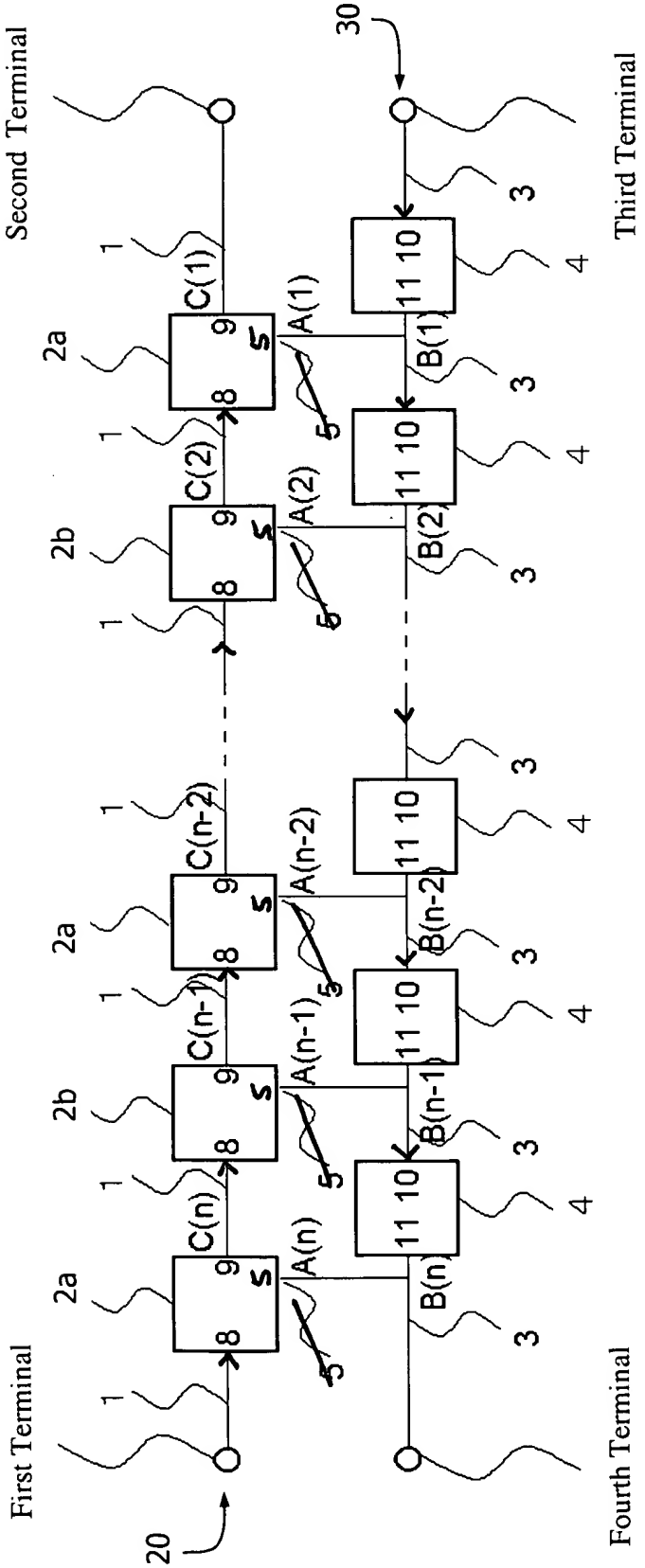

Fig. 1

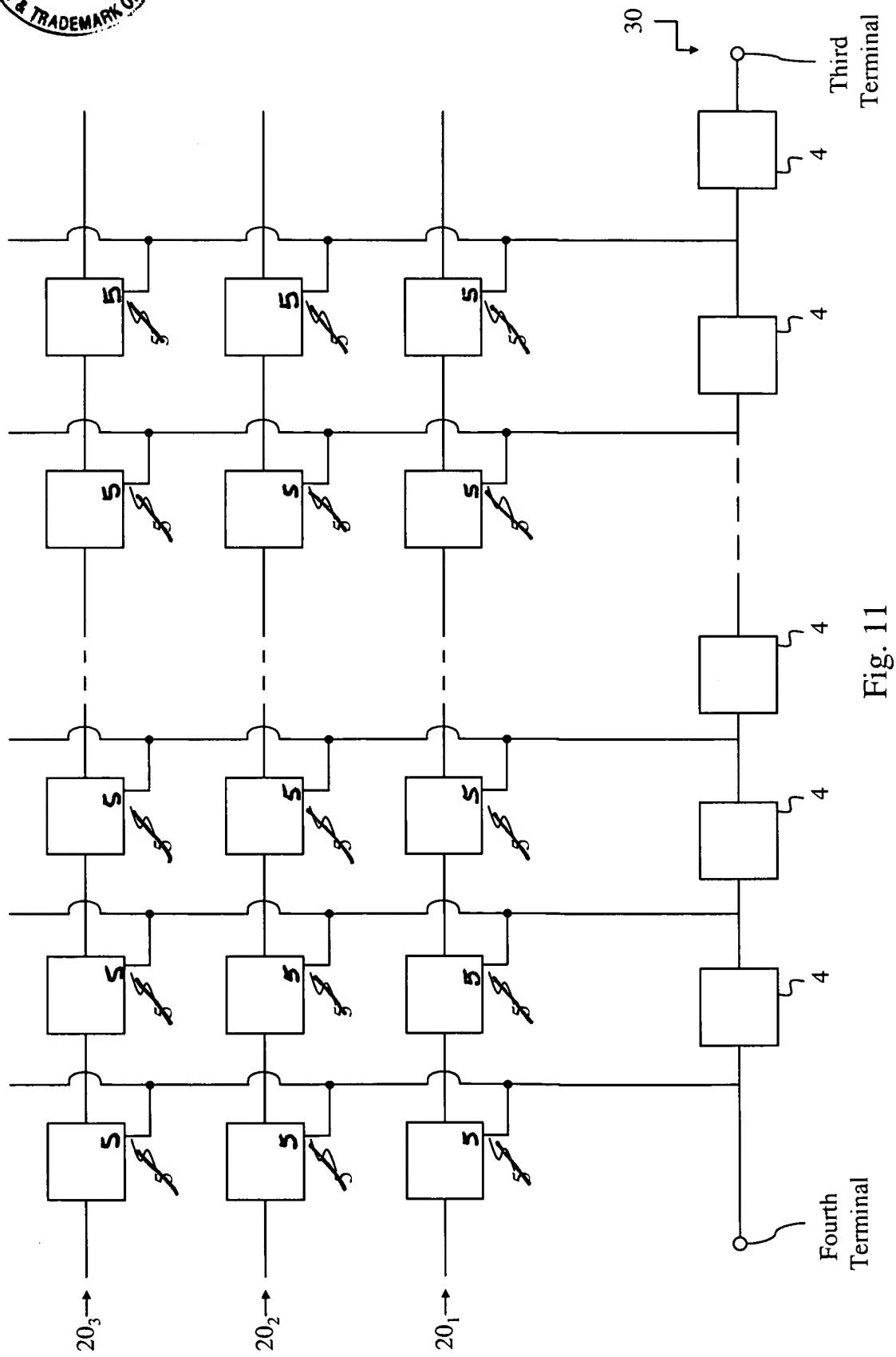

Fig. 11